



4

# SEQUENCE LISTING

<110> Alland, David  
Bloom, Barry R.  
Jacobs Jr., William R.

<120> iniB, iniA AND iniC GENES OF MYCOBACTERIA AND METHODS  
OF USE

<130> 96700/491

<140> 09/177,349

<141> 1998-10-23

<160> 14

<170> PatentIn Ver. 2.0

<210> 1

<211> 53

<212> DNA

<213> Mycobacterium tuberculosis

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<210> 3

<211> 479

<212> PRT

<213> Mycobacterium tuberculosis

<400> 3

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Ala Ala Arg Ser Phe Val Ala Ala Pro Gly Arg Ala Met Thr Ser Ala  
 20 25 30

Gly Leu Ile Asp Ile Ala Pro His Gln Ile Ser Ser Val Ala Ala Asn  
 35 40 45

Val Val Pro Gly Leu Asn Leu Gly Ala Gly Asp Pro Met Ser Gly Leu  
 50 55 60

Arg Gln Ala Val Ala Ala Arg His Gly Phe Ala Gln Asp Val Ala Asn  
 65 70 75 80

Val Gly Phe Ala Gly Asp Ala Gly Ala Gly Val Ala Ser Val Ile Thr  
 85 90 95

Thr Asp Val Gly Ala Gly Leu Ala Ser Gly Leu Gly Ala Gly Phe Leu  
 100 105 110

Gly Gln Gly Gly Leu Ala Leu Ala Ala Ser Ser Gly Gly Phe Gly Gly  
 115 120 125

Gln Val Gly Leu Ala Ala Gln Val Gly Leu Gly Phe Thr Ala Val Ile  
 130 135 140

Glu Ala Glu Val Gly Ala Gln Val Gly Ala Gly Leu Gly Ile Gly Thr  
 145 150 155 160

Gly Leu Gly Ala Gln Ala Gly Met Gly Phe Gly Gly Gly Val Gly Leu  
 165 170 175

Gly Leu Gly Gly Gln Ala Gly Gly Val Ile Gly Gly Ser Ala Ala Gly  
 180 185 190

Ala Ile Gly Ala Gly Val Gly Gly Arg Leu Gly Gly Asn Gly Gln Ile  
 195 200 205

Gly Val Ala Gly Gln Gly Ala Val Gly Ala Gly Val Gly Ala Gly Val  
 210 215 220

Gly Gly Gln Ala Gly Ile Ala Ser Gln Ile Gly Val Ser Ala Gly Gly  
 225 230 235 240

Gly Leu Gly Gly Val Gly Asn Val Ser Gly Leu Thr Gly Val Ser Ser  
 245 250 255

Asn Ala Val Leu Ala Ser Asn Ala Ser Gly Gln Ala Gly Leu Ile Ala  
 260 265 270

Ser Glu Gly Ala Ala Leu Asn Gly Ala Ala Met Pro His Leu Ser Gly  
 275 280 285

Pro Leu Ala Gly Val Gly Val Gly Gly Gln Ala Gly Ala Ala Gly Gly  
 290 295 300

Ala Gly Leu Gly Phe Gly Ala Val Gly His Pro Thr Pro Gln Pro Ala  
 305 310 315 320

Ala Leu Gly Ala Ala Gly Val Val Ala Lys Thr Glu Ala Ala Ala Gly  
 325 330 335

Val Val Gly Gly Val Gly Gly Ala Thr Ala Ala Gly Val Gly Gly Ala  
 340 345 350

His Gly Asp Ile Leu Gly His Glu Gly Ala Ala Leu Gly Ser Val Asp  
 355 360 365

Thr Val Asn Ala Gly Val Thr Pro Val Glu His Gly Leu Val Leu Pro  
 370 375 380

Ser Gly Pro Leu Ile His Gly Gly Thr Gly Gly Tyr Gly Gly Met Asn  
 385 390 395 400

Pro Pro Val Thr Asp Ala Pro Ala Pro Gln Val Pro Ala Arg Ala Gln  
 405 410 415

Pro Met Thr Thr Ala Ala Glu His Thr Pro Ala Val Thr Gln Pro Gln  
 420 425 430

His Thr Pro Val Glu Pro Pro Val His Asp Lys Pro Pro Ser His Ser  
 435 440 445

Val Phe Asp Val Gly His Glu Pro Pro Val Thr His Thr Pro Pro Ala  
 450 455 460

Pro Ile Glu Leu Pro Ser Tyr Gly Leu Phe Gly Leu Pro Gly Phe  
 465 470 475

<210> 4

<211> 640

<212> PRT

<213> Mycobacterium tuberculosis

<400> 4

Met Val Pro Ala Gly Leu Cys Ala Tyr Arg Asp Leu Arg Arg Lys Arg  
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Ala Arg Lys Trp Gly Asp Thr Val Thr Gln Pro Asp Asp Pro Arg Arg  
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Val Gly Val Ile Val Glu Leu Ile Asp His Thr Ile Ala Ile Ala Lys  
 35 40 45

Leu Asn Glu Arg Gly Asp Leu Val Gln Arg Leu Thr Arg Ala Arg Gln  
 50 55 60

Arg Ile Thr Asp Pro Gln Val Arg Val Val Ile Ala Gly Leu Leu Lys  
 65 70 75 80

Gln Gly Lys Ser Gln Leu Leu Asn Ser Leu Leu Asn Leu Pro Ala Ala  
 85 90 95

Arg Val Gly Asp Asp Glu Ala Thr Val Val Ile Thr Val Val Ser Tyr  
 100 105 110

Ser Ala Gln Pro Ser Ala Arg Leu Val Leu Ala Ala Gly Pro Asp Gly  
 115 120 125

Thr Thr Ala Ala Val Asp Ile Pro Val Asp Asp Ile Ser Thr Asp Val  
 130 135 140

Arg Arg Ala Pro His Ala Gly Gly Arg Glu Val Leu Arg Val Glu Val  
 145 150 155 160

Gly Ala Pro Ser Pro Leu Leu Arg Gly Gly Leu Ala Phe Ile Asp Thr  
 165 170 175

Pro Gly Val Gly Gly Leu Gly Gln Pro His Leu Ser Ala Thr Leu Gly  
 180 185 190

Leu Leu Pro Glu Ala Asp Ala Val Leu Val Val Ser Asp Thr Ser Gln  
 195 200 205

Glu Phe Thr Glu Pro Glu Met Trp Phe Val Arg Gln Ala His Gln Ile  
 210 215 220

Cys Pro Val Gly Ala Val Val Ala Thr Lys Thr Asp Leu Tyr Pro Arg  
 225 230 235 240

Trp Arg Glu Ile Val Asn Ala Asn Ala Ala His Leu Gln Arg Ala Arg  
 245 250 255

Val Pro Met Pro Ile Ile Ala Val Ser Ser Leu Leu Arg Ser His Ala  
 260 265 270

Val Thr Leu Asn Asp Lys Glu Leu Asn Glu Glu Ser Asn Phe Pro Ala  
 275 280 285

Ile Val Lys Phe Leu Ser Glu Gln Val Leu Ser Arg Ala Thr Glu Arg  
 290 295 300

Val Arg Ala Gly Val Leu Gly Glu Ile Arg Ser Ala Thr Glu Gln Leu  
 305 310 315 320

Ala Val Ser Leu Gly Ser Glu Leu Ser Val Val Asn Asp Pro Asn Leu  
 325 330 335

Arg Asp Arg Leu Ala Ser Asp Leu Glu Arg Arg Lys Arg Glu Ala Gln  
 340 345 350

Gln Ala Val Gln Gln Thr Ala Leu Trp Gln Gln Val Leu Gly Asp Gly  
 355 360 365

Phe Asn Asp Leu Thr Ala Asp Val Asp His Asp Leu Arg Thr Arg Phe  
370 375 380

Arg Thr Val Thr Glu Asp Ala Glu Arg Gln Ile Asp Ser Cys Asp Pro  
385 390 395 400

Thr Ala His Trp Ala Glu Ile Gly Asn Asp Val Glu Asn Ala Ile Ala  
405 410 415

Thr Ala Val Gly Asp Asn Phe Val Trp Ala Tyr Gln Arg Ser Glu Ala  
420 425 430

Leu Ala Asp Asp Val Ala Arg Ser Phe Ala Asp Ala Gly Leu Asp Ser  
435 440 445

Val Leu Ser Ala Glu Leu Ser Pro His Val Met Gly Thr Asp Phe Gly  
450 455 460

Arg Leu Lys Ala Leu Gly Arg Met Glu Ser Lys Pro Leu Arg Arg Gly  
465 470 475 480

His Lys Met Ile Ile Gly Met Arg Gly Ser Tyr Gly Gly Val Val Met  
485 490 495

Ile Gly Met Leu Ser Ser Val Val Gly Leu Gly Leu Phe Asn Pro Leu  
500 505 510

Ser Val Gly Ala Gly Leu Ile Leu Gly Arg Met Ala Tyr Lys Glu Asp  
515 520 525

Lys Gln Asn Arg Leu Leu Arg Val Arg Ser Glu Ala Lys Ala Asn Val  
530 535 540

Arg Arg Phe Val Asp Asp Ile Ser Phe Val Val Ser Lys Gln Ser Arg  
545 550 555 560

Asp Arg Leu Lys Met Ile Gln Arg Leu Leu Arg Asp His Tyr Arg Glu  
565 570 575

Ile Ala Glu Glu Ile Thr Arg Ser Leu Thr Glu Ser Leu Gln Ala Thr  
580 585 590

Ile Ala Ala Ala Gln Val Ala Glu Thr Glu Arg Asp Asn Arg Ile Arg  
595 600 605

Glu Leu Gln Arg Gln Leu Gly Ile Leu Ser Gln Val Asn Asp Asn Leu  
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<210> 5

<211> 493

<212> PRT

<213> Mycobacterium tuberculosis

<400> 5

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Gln Leu Asp Arg Ile Gly Ala Arg Leu Ala Glu Pro Leu Arg Ile Ala  
35 40 45

Leu Ala Gly Thr Leu Lys Ala Gly Lys Ser Thr Leu Val Asn Ala Leu  
50 55 60

Val Gly Asp Asp Ile Ala Pro Thr Asp Ala Thr Glu Ala Thr Arg Ile  
65 70 75 80

Val Thr Trp Phe Arg His Gly Pro Thr Pro Arg Val Thr Ala Asn His  
85 90 95

Arg Gly Gly Arg Arg Ala Asn Val Pro Ile Thr Arg Arg Gly Gly Leu  
100 105 110

Ser Phe Asp Leu Arg Arg Ile Asn Pro Ala Glu Leu Ile Asp Leu Glu  
115 120 125

Val Glu Trp Pro Ala Glu Glu Leu Ile Asp Ala Thr Ile Val Asp Thr  
130 135 140

Pro Gly Thr Ser Ser Leu Ala Cys Asp Ala Ser Glu Arg Thr Leu Arg  
145 150 155 160

Leu Leu Val Pro Ala Asp Gly Val Pro Arg Val Asp Ala Val Val Phe  
165 170 175

Leu Leu Arg Thr Leu Asn Ala Ala Asp Val Ala Leu Leu Lys Gln Ile

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Ala Ser Arg Ala Asp Glu Ile Gly Ala Gly Arg Ile Asp Ala Met Leu		
210	215	220
Ser Ala Asn Asp Val Ala Lys Arg Phe Thr Arg Glu Leu Asn Gln Met		
225	230	235
Gly Ile Cys Gln Ala Val Val Pro Val Ser Gly Leu Leu Ala Leu Thr		
245	250	255
Ala Arg Thr Leu Arg Gln Thr Glu Phe Ile Ala Leu Arg Lys Leu Ala		
260	265	270
Gly Ala Glu Arg Thr Glu Leu Asn Arg Ala Leu Leu Ser Val Asp Arg		
275	280	285
Phe Val Arg Arg Asp Ser Pro Leu Pro Val Asp Ala Gly Ile Arg Ala		
290	295	300
Gln Leu Leu Glu Arg Phe Gly Met Phe Gly Ile Arg Met Ser Ile Ala		
305	310	315
Val Leu Ala Ala Gly Val Thr Asp Ser Thr Gly Leu Ala Ala Glu Leu		
325	330	335
Leu Glu Arg Ser Gly Leu Val Ala Leu Arg Asn Val Ile Asp Gln Gln		
340	345	350
Phe Ala Gln Arg Ser Asp Met Leu Lys Ala His Thr Ala Leu Val Ser		
355	360	365
Leu Arg Arg Phe Val Gln Thr His Pro Val Pro Ala Thr Pro Tyr Val		
370	375	380
Ile Ala Asp Ile Asp Pro Leu Leu Ala Asp Thr His Ala Phe Glu Glu		
385	390	395
Leu Arg Met Leu Ser Leu Leu Pro Ser Arg Ala Thr Thr Leu Asn Asp		
405	410	415
Asp Glu Ile Ala Ser Leu Arg Arg Ile Ile Gly Gly Ser Gly Thr Ser		
420	425	430
Ala Ala Ala Arg Leu Gly Leu Asp Pro Ala Asn Ser Arg Glu Ala Pro		

435                                      440                                      445  
 Arg Ala Ala Leu Ala Ala Ala Gln His Trp Arg Arg Arg Ala Ala His  
 450                                      455                                      460  
 Pro Leu Asn Asp Pro Phe Thr Thr Arg Ala Cys Arg Ala Ala Val Arg  
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 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Uniamp primer  
 sequence

<400> 6  
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<210> 7  
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 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Uniamp XhoI  
 adapter sequence top strand

<400> 7  
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<210> 8  
 <211> 35  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Uniamp XhoI  
 adapter sequence bottom strand

<400> 8  
 actcgagcta tcgattctgg aaccttcaga gggttt 35

<210> 9  
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<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer

<400> 9  
gcgctggcgg gagatcgta atg

23

<210> 10  
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<223> Description of Artificial Sequence: primer

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24

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<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer

<400> 11  
tcccgccgcc gaacaccta

19

<210> 12  
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<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: primer

<400> 12  
ggatccggcc gaccagaga

19

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<213> Artificial Sequence

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<223> Description of Artificial Sequence: primer

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<210> 14

<211> 24

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: primer

<400> 14

cagacccccga tccgaactga gacc

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